

an anode having an anode catalyst associated therewith for producing cations from the fuel;

a fuel manifold, connected between the main fuel inlet and the anode, for distributing the fuel to the anode;

an oxidant inlet means for supplying an oxidant;

a cathode having a cathode catalyst associated therewith and connected to the oxidant inlet means, for producing anions from the oxidant, said anions reacting with said cations to form water on said cathode;

an ion exchange membrane deposited between said anode and said cathode, said membrane facilitating migration of cations from said anode to said cathode, while isolating the fuel and the oxidant from one another; and

a catalytic reactor having a first inlet for the fuel and a second inlet for the oxidant, and an outlet for remaining gas that has been heated and humidified, the catalytic reactor being connected to the main fuel inlet, whereby, in use, with the fuel and the oxidant supplied to the catalytic reactor and the fuel being supplied in excess of the stoichiometric amount, the remaining, heated and humidified gas comprises heated and humidified fuel and is supplied from the catalytic reactor to the main fuel inlet.

6. A fuel cell system as claimed in claim 4 or 5, wherein the catalytic reactor is generally tubular.

7. A fuel cell system as claimed in claim 5, wherein the outlet of the catalytic reactor is connected by a first control valve to the main fuel inlet of the fuel cell stack and by a second control valve to the oxidant inlet means whereby, in use, the outlet of the catalytic reactor can be selectively connected to one of the main fuel inlet and the oxidant inlet means, with supply of the oxidant and the fuel to the catalytic reactor adjusted so that the remaining, heated and humidified gas at

the outlet of the catalytic reactor includes an excess of gas corresponding to said one of the main fuel inlet and the oxidant inlet means.

11. A fuel cell system as claimed in claim 10, wherein the catalytic reactor is provided in the main fuel supply line, and wherein a second catalytic reactor is provided in the main air supply line and a secondary fuel supply line connects the main fuel supply line to the secondary catalytic reactor, for a supply of fuel in an amount less than the stoichiometric amount required for combustion with air, whereby, the secondary catalytic reactor generates heated and humidified air.

12. A fuel cell system as claimed in claim 11, wherein each of the first and second catalytic reactors is generally tubular.

In the drawings:

Please find enclosed, an amended first drawing sheet showing proposed corrections in red. Please also find enclosed formal drawings on five sheets, including these corrections.